

REMARKS

Claims 1-7 and 16-28 are pending in this application. Claims 8-15 were withdrawn from consideration as being non-elected claims, and are hereby cancelled pending the possible filing of a divisional application. Claims 1 and 3-5 are amended and claims 16-28 have been added herein. Applicant respectfully requests reconsideration of the claims in view of the following remarks.

Claims 3-5 have been objected to because of a number of informalities. These claims have been amended as suggested by the Examiner. Nothing in this amendment narrows the scope of these claims.

Claims 3-7 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the language in claim 3 has been clarified to remove any question raised by the Examiner. It is respectfully submitted these claims are in condition for allowance.

Claims 1-7 have been rejected under 35 U.S.C. § 102 (b) as being anticipated by Akram, *et al.* (U.S. Patent No. 6,271,590 B1). Applicant respectfully traverses this rejection.

Claim 1, as amended, specifically recites "one barrier layer WN_x , where x is selected in said one barrier layer as a specific value between 0.3 and 0.5." It is respectfully submitted the references of record do not teach or suggest the limitations of claim 1.

In particular, the Examiner has pointed to column 4, lines 1-7 to show that Akram, *et al.* teaches a WN_x layer. In this portion of the prior art reference, Akram, *et al.* describes a graded layer for use in semiconductor circuits. This graded layer (see layer 50 in Figure 6, for example) comprises a WN_x layer where the nitrogen content is changed between 0.25% to 99.5% (see, for

example, column 4, lines 4 and 5). The change of the nitrogen content can also be performed in discrete steps so that the graded layer 50 is formed by three sublayers 50a, 50b and 50c, as described in column 4, lines 14-19 and Figure 6.

Contrary to such a barrier layer, claim 1 provides a microelectronic component wherein the barrier layer has a constant nitrogen content which has a specific value between 30% and 50%. Akram, *et al.* does not teach or suggest a microelectronic component with such a barrier layer. It is therefore respectfully submitted that claim 1 is allowable over the references of record.

Claims 2-7 each depend from claim 1 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding additional limitations.

Claims 16-28 have been added herein. No new matter has been added. It is respectfully submitted that these claims are allowable over the references of record. For example, claim 16 requires a barrier layer overlying and physically touching the first region, the barrier layer comprising a uniform composition layer of WN_x , where x is a substantially constant value between 0.3 and 0.5. Claim 24 recites a transistor that includes a barrier layer overlying the gate dielectric, where the barrier layer comprises a single layer of WN_x , where x is a constant value between 0.3 and 0.5. It is respectfully submitted the newly added claims are allowable over the references of record.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Ira S. Matsil, Applicant's attorney, at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in

connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge Deposit Account No. 50-1065.

Respectfully submitted,



December 13, 2004

Date

Ira S. Matsil
Attorney for Applicant
Reg. No. 35,272

Slater & Matsil, L.L.P.
17950 Preston Rd., Suite 1000
Dallas, Texas 75252-5793
Tel. 972-732-1001
Fax: 972-732-9218